

TECHNICAL MEMORANDUM

Utah Coal Regulatory Program

March 9, 2009

TO: Internal File

THRU: Daron Haddock, Permit Supervisor *DRH*

FROM: Priscilla Burton, CPSSc, Environmental Scientist III, Team Lead *pwb km sss*

SUBJECT: Permit Application – Coal Hollow Mine, Alton Coal Development, LLC, Kane County, C/025/005, Task ID #3100,

SUMMARY:

On December 22, 2008, the Division received a response to the deficiencies outlined in Coal Hollow review Task 2910. The proposal was determined to be administratively complete on March 14, 2008 (2008/Outgoing/0001.pdf). Alton Coal Development, LLC provided public notice for the proposed mine on March 26 through April 16, 2008 in the Southern Utah News. The Division notified local, state, and federal governing agencies on March 19, 2008 (Outgoing/0002.pdf). The State Planning Coordinator, Mike Mower, was included in the distribution list. On March 31, 2008, the Southern Utah Wilderness Alliance (SUWA) was sent an electronic version of the agency notification letter. The Division received many comments in response to the public notice (see 2008/Incoming) and several requests were made for an informal conference. That conference was held June 16, 2008 in Alton, Utah. The Informal Conference written comment period ended on June 20, 2008. Twelve written comments were received, including a petition requesting further studies of natural and cultural resources in the adjacent area. The petition provides contact information for 37 signatories. To date there has not been an Unsuitability Petition received.

The Division has one year to review the application and write the findings in support of permit issuance or in explanation of permit denial. As of March 12, the Division has accrued a total of 185 days review time.

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TECHNICAL ANALYSIS:

GENERAL CONTENTS

IDENTIFICATION OF INTERESTS

Regulatory Reference: 30 CFR 773.22; 30 CFR 778.13; R645-301-112

Analysis:

In Chapter 1, Section 112, the applicant has met the requirements to provide ownership and control information for the operation and surface lands affected. The applicant and operator is Alton Coal Development, LLC, a limited liability company. The company is registered with the Utah Department of Commerce (Confidential Binder, Appendix 1-1). The corporate office is in Cedar City. The telephone and address is provided. The list of company officers' names and addresses and percent ownership, and the employer identification number have been provided. Chris McCourt is the resident agent and manager. Robert C. Nead, Jr., has been designated as the person responsible for paying the abandoned mine land reclamation fee (Section 112.230).

Surface and coal ownership are displayed on Dwg. 1-3 and 1-4, respectively and described in Section 112.500. The permit area surface is owned by two parties: C. Burton Pugh and the Allecia Swapp Dame Trust, administered by Richard Dame, Trustee. (Contact information for the surface owners have been provided.) Surface lands have been leased to the applicant. The lease assignments are included in the Confidential binder, Appendix 1-2.

Section 112.500 also provides the name and addresses of the owners of the coal to be mined. All 435 acres of coal to be mined is privately held, and has been leased by Alton Coal. The leases are provided in the Confidential binder, Appendix 1-2. There are 200 acres of coal owned by the Bureau of Land Management (BLM) in the north portion of the permit area shown on Dwg. 1-4, but this coal will not be mined.

Adjacent surface and subsurface ownership is displayed on Dwg. 1-3 and 1-4. As stated in Section 112.600, the BLM and Darlynn and Arlene Sorensen own land contiguous to the permit area.

Interest in adjacent federal coal is outlined in Section 112.800. The applicant has filed a lease by application with the BLM. At this time, the BLM is writing an Environmental Impact Statement. The BLM has determined the size of the Alton Coal Tract LBA to be approximately 3,600 acres (BLM Open House, Salt Lake City, February 2007).

The MSHA number for the mine site is 42-02519 (Section 112.700) MSHA numbers for structures are pending.

Findings:

The information provided meets the requirements of the Regulations for Identification of Interests.

VIOLATION INFORMATION

Regulatory Reference: 30 CFR 773.15(b); 30 CFR 773.23; 30 CFR 778.14; R645-300-132; R645-301-113

Analysis:

Section 113 of the application states that there are no violations, suspensions, revocations, or forfeitures on record for Alton Coal Resources, LLC., or its officers or affiliates. An Applicant Violator System check indicated that the company has not operated previously in the United States and that two of the officers have been previously engaged in coal mining operations. No violations were retrieved from the system on March 13, 2008.

Findings:

The applicant has met the requirements of the Rules for Violation Information.

RIGHT OF ENTRY

Regulatory Reference: 30 CFR 778.15; R645-301-114

Analysis:

The applicant has right of entry to 794.74 acres in T. 39 S., R. 5 W. Salt Lake Meridian, Sections 19, 20, 29, and 30. The application states that right of entry was obtained through lease agreement with the surface and mineral lease owners (Section 114). These agreements are found in the Confidential Binder, Appendix 1-2. Fee coal beneath Pugh surface is held by several individuals: C. Burton Pugh.. 40.5% of the coal; Margaret Moyers, 22.5%, and Roger Pugh, 37% (according to p. 32 of the Roger Pugh lease document). (Roger Pugh inherited the coal ownership from Verna Pugh who is deceased (personal communication from Chris McCourt on February 18, 2009).

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Specific surface lands are described in the C. Burton Pugh lease document, which encompasses 732.78 acres (App. 1-2, Ex. 1), which includes land east of the permit area. Interest in the subsurface east of the permit area was declared in Section 112. 800. The Moyers and R. Pugh lease documents encompass 372.68 subsurface acres of coal within the permit area, as shown by Dwg 1-4.

Exhibit 2 of Appendix 1-2 is the Dame Trust lease, which was signed by the Trustee, Richard Dame, on April 29, 2005. Specific lands are described in the Dame lease document, encompassing 61.96 acres.

Findings:

The information provided meets the requirements of the Regulations for Right of Entry.

LEGAL DESCRIPTION AND STATUS OF UNSUITABILITY CLAIMS

Regulatory Reference: 30 CFR 778.16; 30 CFR 779.12(a); 30 CFR 779.24(a)(b)(c); R645-300-121.120; R645-301-112.800; R645-300-141; R645-301-115.

Analysis:

The application provides a legal description for the 635.64 acre permit area on pages 1-4 and 1-5. The permit area legal description matches the permit area shown on Dwg. 1-1. The land within the permit area is all privately owned surface.

Two public roads run through the permit area: the Sink Valley Road (K3990 and the Robinson Creek Road (K3993). Both roads are claimed by Kane County under RS2477. The mining plan requires temporary closure of K3993 and temporary relocation of K3990 for the life of mine. As required by UAC Section 40-10-24-(4)(c), and R645-103-234, a public hearing for the temporary relocation of K39990 was held on June 16, 2008 and a written finding was made on July 18, 2008 (2008\Outgoing\0024.pdf). The Division made three findings with regard to K39990:

1. There was not sufficient information available to ensure that the interests of the public and the landowners affected would be protected.
2. The BLM environmental analysis and Record of Decision concerning the temporary right of way for relocation of the County road onto federal land would be forthcoming and available to the Division. And, the Kane County construction and maintenance agreement with the Applicant will be made

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available to the Division. [The BLM EA and Kane County Agreements have been included in Chap. 1, App. 1-7.]

3. When the additional information is available, the Division would provide an opportunity for further public hearing and then make a further finding.

In accordance with the above findings, a notice will be placed in the Southern Utah News concerning the availability of information on the temporary relocation of K3990 and the temporary closure of K3993 and the opportunity for public hearing, if requested.

The Swapp ranch house is not within 300 ft. of the permit area, as illustrated on Dwg. 1-5 which is drawn on a scale of 1 inch = 100 ft. The Dame lease (included in Exhibit 2 of Appendix 1-2 confidential volume) provides right of entry to land adjacent to the Swapp Ranch, but does not allow mining closer than 300 ft. to the dwelling.

Federal lands within T.39 S., R. 5 W., Salt Lake Meridian, were included in the petition for unsuitability in 1980 (Exhibit 2, Appendix 1-3). On December 16, 1980, Cecil Andrus, Secretary of Interior, designated lands to the northeast, east and southeast of the proposed permit area (in Ranges 2, 3, and 4 West) as unsuitable for underground and/or surface methods, in accordance with Section 522(a)(3)(B) of the Surface Mining Control and Reclamation Act (SMCRA). The "unsuitable" designation was made to protect fragile natural systems and to preserve the scenic beauty of at Bryce Canyon National Park and the park visitors' experience (Appendix 1-3, Exhibit 1).

The Secretary specified in items 5 and 6 of the unsuitability determination that any future specific mining plan or permit application for surface mining of the other federal lands in the Alton Coal field should be reviewed for visibility, vibration, and noise issues by the Department of Interior (through the National Park Service and the Office of Surface Mining) to determine whether specific conditions or stipulations should be placed on the permit. The Secretary stressed that the unsuitability designation was not "the only basis for protection of the values for which Bryce Canyon National Park was established," and directed the Department of Interior to take Park values into account in future decisions on undesignated federal lands near the park. These issues are being reviewed by the BLM in the Draft Alton Coal Tract LBA Environmental Impact Statement (EIS).

UAC Section 40-10-24(1)(a) restates SMCRA Section 522(a)(4) and 522(a)(5) which requires that on non-federal lands, the board and the division have an obligation to establish a planning process enabling objective decisions based upon competent and scientifically sound data and information as to which, if any, lands in the State are unsuitable for mining. Such determinations should be integrated with the land use planning processes at the local and state and federal levels. UAC Section 40-10-24(1)(c) describes the unsuitability criteria that must be balanced against the economic impact in a cost-benefit analysis. They include incompatibility with current land use plans; the affect on fragile or historic and cultural lands; the affect on

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aesthetic values and natural systems; the affect on renewable resource lands, in particular the water supply and aquifer recharge; and areas subject to flooding or unstable geology. To date there have been no petitions for unsuitability and no determinations of unsuitability made for this (fee) coal mining proposal.

UAC Section 40-10-24(4) places prohibitions on mining in National Parks, designated Wild and Scenic Rivers, National Recreation Areas etc. Pertinent to this proposal is UAC, Section 40-10-24(4)(b) which prohibits adverse effects on historic sites unless approved jointly by the division and state or local agency with jurisdiction over the historic site. Many public comments received by the Division were concerned with affects of traffic, noise, dust, vibration on the designated Panguitch Historic District and the affects of truck traffic on safety on SR 89 and the tourist economy in Garfield County and Panguitch.

Lands to be disturbed by coal mining and reclamation are not "unsuitable" as defined by 40-10-24(4) of the Act. Coal mining and reclamation operations would not adversely affect any publicly owned park or any place included in the National Register of Historic Places (R645-103-326). Kane County Commissioner Habbeshaw commented that the Utah Heritage Act supports coal trucking on Hwy 89 (0063.pdf).

Public Lands Policy Coordinating Office (PLPCO) and State Historic Preservation Office (SHPO) were notified of the administrative completeness on March 19, 2008. PLPCO did not provide comment. SHPO provided concurrence (7/14/08) on the Cultural Resource Management Plan (CRMP) and data recovery plan for seven archaeological sites that will be adversely affected. Phase 2 of the CRMP pertains to Panguitch and the pending federal lease action. The CRMP is in Confidential App. 4-1.

There will be an opportunity for public comment on socio-economic issues when the Bureau of Land Management DRAFT Environmental Impact Statement goes out for public review.

Commenters may file an unsuitability claim under R645-103-237, for the proposed permit and the adjacent federal lease by application area. However, under R645-103-431.600, the Division may decide not to process the part of the pertaining to lands to which an administratively complete permit application has already been received. A petitioner must meet an "injury in fact" test as described by R645-103-421 and provide a description of the impact of the designation (R645-103-422.300 and R645-103-422.800). Petitioners should also keep in mind the criteria for designating land as unsuitable (R645-103-320).

Findings:

The information provided does not yet met the requirements for unsuitability.

R645-103-234.200 and R645-300-123.400, Ownership for the unimproved road running east/west along Robinson Creek (K3993) should be described in the MRP (or public easement, if any).

PERMIT TERM

Regulatory References: 30 CFR 778.17; R645-301-116.

Analysis:

The permit term of five years will allow for the three year mining plan and reclamation of the last 1000 ft. of highwall within a single permit term. The applicant has not requested a longer term. Section 116 of the application describes the acreage to be mined during each of the three years of mining activity. The disturbance sequence is shown on Dwg. 5-2. A total of 433 acres will be mined.

Findings:

The information provided meets the requirements for a five-year mining permit.

PUBLIC NOTICE AND COMMENT

Regulatory References: 30 CFR 778.21; 30 CFR 773.13; R645-300-120; R645-301-117.200.

Analysis:

A draft of the public notice was provided with the application in Appendix 1-5. A revised version of this notice appeared in the Southern Utah News from March 26 through April 16, 2008. A copy of the public notice, as it appeared, was sent to the Division by email on April 2, 2008 and was made part of the public record (2008/Incoming/0009.pdf). The notice indicated that the public comment period would run for 30 days after the last notice. i.e. until May 16, 2008. Within this timeframe, supportive comments were received from the Kane County Commission, Representative Mike Noel, Alton Mayor Claren Heaton, the Utah Mining Association and from 6 regional residents (from Kanab, St. George, Cedar City, and other unspecified locations). Supportive comments focused on the need for jobs and industry in the region and the need to provide for energy independence.

Also within this time frame, negative comments were received from 7 out of state residents (Alaska, Pennsylvania, Ohio, Nevada and unspecified locations); 8 regional residents (Kanab, St. George, Santa Clara, and other unspecified locations) and one housing subdivision

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corporation east of Bryce Canyon National Park and the organization Save Our Air & Resources (Richfield Utah); one Hatch resident; and 16 Panguitch business and homeowners whose main concerns were the affects to the tourist industry by the transportation of coal (300 trucks daily) in the SR 89 corridor (recently designated the "Mormon Pioneer Heritage Highway") and through the Panguitch National Historic District; the affects of coal truck traffic on safety; the affect of particulates on visibility and the affect of lighting on the night sky; the displacement of wildlife; the affects to water resources from selenium and mercury; and the affects of a haul route through Alton. Three of these petitioners requested an informal conference based upon these issues.

The Division's agency notification letter (2008/Outgoing/0002.pdf) indicated the comment period would end on May 22, 2008 (not realizing how quickly the public notice would be published). Consequently, several more comments were received by May 22, including comments from the Southern Utah Wilderness Alliance, 13 southwestern region residents (Kanab, Cedar City, and unspecified), 4 Panguitch residents, 2 Hatch residents, and 2 Alton residents, all of whom were not in favor of the proposal. Three of these commenters requested an informal conference. In addition, the SUWA requested "Consulting Party Status" for cultural resource management.

Also received by May 22 was a supportive comment from one individual from the Southwestern region of Utah whose location was unidentified. In all 43 comments were received on or before May 22, 2008.

The Division has provided public notice in the Garfield County News and the Southern Utah News two weeks prior to the informal conference which was held on June 16, 2008 in Alton. (In addition, each commenter was notified individually of the conference.) Written findings from the Informal Conference were made on July 18, 2008 (2008/Outgoing/0024.pdf). The Findings require that the Division or County provide for another public hearing on the relocation of the County road to determine whether the public health and safety will be protected.

The Division has received comments with regard to this specific Coal Hollow application, for development of fee coal, from the following agencies:

- Powell Ranger District of the Dixie National Forest (2008/Incoming/0048.pdf)
The USFS Service expressed the same concerns as the community: that the area is of importance for tourism, that the traffic on SR 89 is made up of large recreational vehicles traveling to Bryce Canyon N.P., Zion N. P., and the Grand Canyon N.P; that the Class I air shed should not be degraded, since the night sky quality was part of the visitor experience and tourism makes up 60% of the economy.
- Office of Surface Mining (2006/Incoming/0008.pdf) stated that no federal mine plan approval was required.
- State Historic Preservation Office (2007/Incoming/0022.pdf)

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The Division has been coordinating the UAC 9-9-404 review of this project with SHPO and has contracted with PLPCO for an archaeological review of the PAP.

The Governor's Resource Development Coordinating Council also had a public/agency comment period. The RDCC did not provide any comments to the Division.

Findings:

The information provided by the Applicant has met the requirements for public notification. The Division is attempting to fulfill its requirement to include the public in the permitting process. Written findings from the Informal Conference were made on July 18, 2008 (2008\Outgoing\0024.pdf). The Findings require that the Division or County provide for another public hearing on the relocation of the County road to determine whether the public health and safety will be protected.

FILING FEE

Regulatory Reference: 30 CFR 777.17; R645-301-118.

Analysis:

This \$5.00 fee was paid with the application.

Findings:

The Applicant has met the requirements of the filing fee.

PERMIT APPLICATION FORMAT AND CONTENTS

Regulatory Reference: 30 CFR 777.11; R645-301-120.

Analysis:

Appendix 1-6 contains a statement of the mine permit application's veracity and accuracy from Chris McCourt, the manager and resident agent for Alton Coal Development, LLC. The information provided is in a format prescribed by the Division.

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Findings:

The information provided is in a format prescribed by the Division and meets the requirements of R645-301-121.300. Elsewhere in this technical analysis, the Division makes requests for further information or requests clarification.

REPORTING OF TECHNICAL DATA

Regulatory Reference: 30 CFR 777.13; R645-301-130.

Analysis:

Analytical data is accompanied by the names of the individuals or firms responsible for collection and/or analysis of the data. A list of individuals and consulting firms contributing to the Mining and Reclamation Plan is found in Section 130.

Findings:

The information provided meets the requirements of the Utah Coal Rules.

COMPLETENESS

Regulatory Reference: 30 CFR 777.15; R645-301-150.

Analysis:

The first application was received on June 27, 2006 and was determined incomplete on August 22, 2006. The second application was received on June 14, 2007 and was determined incomplete on August 27, 2007. Supplemental information to the June 14, 2007 application was received on January 24, 2008. The Applicant was notified that the application package (combined information received June 14, 2007 and on January 24, 2008) was considered complete on March 14, 2008 (2008/Outgoing/ 0001.pdf and 0001a.pdf).

Findings:

The Applicant has met the completeness requirements.

ENVIRONMENTAL RESOURCE INFORMATION

Regulatory Reference: Pub. L 95-87 Sections 507(b), 508(a), and 516(b); 30 CFR 783., et. al.

GENERAL

Regulatory Reference: 30 CFR 783.12; R645-301-411, -301-521, -301-721.

Analysis:

Approximately 7,000 ft. elevation, gently sloping land vegetated with Utah juniper, pinyon pine, big sagebrush and wet meadows. Lower Robinson Creek (runs east west on the north of permit area). Sink Valley Wash (runs north south on the east of the permit area). There are several springs and agricultural ponds on eastern boundary of the proposed permit area. The average annual precipitation is 16.43 inches, evenly distributed throughout the year. The current and post mining land use is undeveloped rangeland (wildlife) and livestock pasture (grazing).

Findings:

The information provided meets the requirements of the Rules for general resource information.

SOILS RESOURCE INFORMATION

Regulatory Reference: 30 CFR 783.21; 30 CFR 817.22; 30 CFR 817.200(c); 30 CFR 823; R645-301-220; R645-301-411.

Analysis:

The application includes a non-prime farmland determination by the NRCS in Appendix 2-1, Section 1). The Order II soil survey in Appendix 2-1 includes field description of soil pits, laboratory analysis of samples taken by horizon, and a soil map (Dwg 2-1). The soil survey classifies the soil into thirteen family map units. These map units are described in the text (Section 222.200) and representative pedons are provided for each unit. Sections Two and Three of Appendix 2-1 provide greater detail on the classification and naming of the soils and the typifying pedons for the soils. Productivity estimates are provided in Section 321.200. Topsoil and subsoil will be salvaged for use in reclamation, no substitute or borrow soils will be needed.

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Findings:

The information provided meets the requirements for baseline soil survey information as required by the R645 Coal Rules.

ALLUVIAL VALLEY FLOORS

Regulatory Reference: 30 CFR 785.19; 30 CFR 822; R645-302-320.

Analysis:

Alluvial Valley Floor Determination

This section was completed jointly by team members, under a separate memo, wherein the Division presents an evaluation of the application contents with regard to R645-302-321, and finds, per R645-302-321.300 that an alluvial valley floor exists within the permit area in R. 5 W., T. 39 S., Sections 29 and 32. The western boundary of the alluvial valley floor is the Tropic Shale Ridge, shown on Dwg 6-1, Location map and legend (after Tilton, 2001). The alluvial valley floor extends eastward to Swapp Hollow in Section 29 and southward to include all of Sink Valley in Section 32. The applicable R645-302 rules are used to organize the discussion below.

Applicability of Statutory Exclusions

None

Findings:

See findings in memo to Daron Haddock, from the Priscilla Burton and Coal Hollow Review team, dated March 10, 2009.

PRIME FARMLAND

Regulatory Reference: 30 CFR 785.16, 823; R645-301-221, -302-270.

Analysis:

The Natural Resources Conservation Service evaluated the soils of the proposed permit area for prime farmland status in the fall of 2006. The NRCS concluded that there were no prime farmland soils in the permit area, however soils on slopes less than 14 percent could qualify as Soils of Statewide Importance, if irrigated (Appendix 2-1, Tab 6 and M:0250005\2006\Incoming\0011.pdf).

Within the permit area, the topography has a gentle slope of 1 – 5% in Soil Map Unit 7 and 3 – 8% in Map Units 1 and 4 (Section 222.300 and Dwg 2-1). Drawing 7-7 identifies flood irrigated and subirrigated lands, ditches that have been used for irrigation, and ponds that retain water for irrigation systems. The Applicant states in App. 7-1, pg. 48, that there has been no irrigation during the past 10 years.

The reason given for the decline in agricultural activity is the lack of appreciable quantities of water (App 7-7, pg. 13). However, water monitoring conducted between 2005 and 2007 shows no appreciable difference from the 1987-88 data from the Utah International application. Although, the palmer hydrologic index (Figure 2, App. 7-1) does indicate that there were several years of drought in the past decade, that would have limited irrigation, the Division concludes that the decline in irrigation in the SW ¼ Sec 20 and the SE ¼ SE ¼ Sec 19 has less to do with water availability, and more to do with the landowner's inclination.

Use of the pastureland within the permit area has declined on Pugh lands. Pasturelands in the SW ¼ Sec 20 and the E ½ E ½ Sec 19 were formerly irrigated from water diverted from Water Canyon (miles upstream) and stored in a pond. During a site visit in October 2008 the Division noted that source waters from Water Canyon on USFS lands had left the stream channel and were lost in overland flow before reaching the collection point at RID-1. In addition, metal collection pipes at RID-1 carried a limited volume due to corrosion and cracking, and the pipes were disconnected along their length from the diversion to the holding pond 20-1. Despite a lack of irrigation, the Division noted 35 cattle grazing subirrigated Pugh lands on October 1, 2008.

Dame holds water rights from springs to irrigate 93 acres. Much of the Dame property is subirrigated and no supplemental irrigation system was noted during a site visit October 2, 2008. Table 2, App. 7-7 indicates depth to ground water in soil pits was between one and six feet on the eastern side of the permit area and between four and ten feet in the center of the permit area, allowing for sub-irrigation of Dame's meadows and pastures.

East of the permit area, the flows from Right Hand Wash, Swapp Canyon Creek, and Sink Valley Wash provide the Sorensens with the water rights to irrigate irrigation of approximately 143 acres in the W ½ of Sections 29 and 32 and stockwater for 300 units. (App. 7-3, Water Rights).

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South of the permit area, Johnson has one surface water right on Sink Valley Wash for the irrigation of 9.0 acres and stockwater for 125 stock units.

Findings:

The Division, in consultation with the NRCS, finds that there are Soils of Statewide Importance, but no prime farmlands in the permit area.

OPERATION PLAN

AIR POLLUTION CONTROL PLAN

Regulatory Reference: 30 CFR 784.26, 817.95; R645-301-244, -301-420.

Analysis:

The Applicant is required to obtain an Air Quality Approval Order prior to receiving a permit to mine. The first step in acquiring an Air Quality Approval Order is to file a Notice of Intent with the Utah Division of Air Quality (DAQ).

One comment received indicated that the Applicant had not filed a Notice of Intent with the Utah Division of Air Quality (DAQ). However, the Permit Application Package indicates that Alton Coal Development, LLC provided the DAQ with a Notice of Intent (NOI) on May 8, 2007 (Section 422 and Appendix 4-2). On July 2, 2008, Maung Maung of the DAQ confirmed that the NOI had been received in May 10, 2007, and review is pending.

Several comments were received during the public comment period and during the informal conference that the ambient and fugitive dust might degrade the characteristic clear skies of the area; that the fugitive dust might affect water quality of nearby streams and perhaps the groundwater; and that uncovered haul trucks might leave coal fines in their wake.

The application states in Section 521.168 (pg. 5-15) that there are "no specific air pollution collection or control facilities proposed." Public concerns are partially addressed by the Applicant's fugitive dust control plan, found in Appendix 4-5, required by R645-301-423. The plan is required to stabilize exposed surface areas (R645-301-244.100); to prevent, minimize and control erosion of regraded areas (R645-301-244.300); and to control sediment contributions to streams (R645-301-244.320 and R645-301-526.220, *et seq*).

The App. 4-5 fugitive dust control plan includes the following:

- Mulch or tackifier application for unseeded topsoil/subsoil stockpiles.
- Seeding of topsoil stockpiles in existence longer than one year.
- Tackifier on graded, unseeded reclamation areas.
- Water sprays (as needed) for material handling points (crushing, screening, transfer, loading, dumping); for excavation and pushing activities; for construction and demolition; for drilling and blasting; and for cleared areas.
- Water sprays or chemical treatment or gravel as needed on unpaved roads and yard areas.
- Synthetic cover on haul truck beds as needed.
- Coarse gravel at entrances to and exits from public roads.

The App. 4-5 monitoring program includes the following:

- The site supervisor will periodically observe the dust at the permit boundary to determine the level of control needed.
- 0 – 5% opacity at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.
- 5 – 10% opacity will result in even more water and/or magnesium chloride applications
- Greater than 10% at the permit boundary triggers increased watering frequency and an application of magnesium chloride on the Out of Pit haulroads.
- Production will stop if dust can not be reduced to 5 – 10% opacity.
- Records of watering will be provided in the Annual report.

The App. 4-5 fugitive dust control plan fails to acknowledge that monitoring and evaluation are requirements of R645-301-423 et seq, for surface mines producing greater than 1,000,000 tons/year and will be enforced by the Division, not the UDEQ. The plan for fugitive dust control practices addresses the requirements of R645-301-244.100 to protect (mulch) and stabilize (tackifier) exposed surface areas (topsoil and subsoil piles and regraded areas). The monitoring program does not address the grading requirements of R645-301-244.300 for areas other than topsoil stockpiles. The monitoring program does not include measurements of the effectiveness of mulching and tackifier applications to control fugitive dust and erosion from exposed surface areas.

The monitoring program should specify what techniques will be used to determine opacity from a non-point source such as the permit boundary.

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Findings:

The information provided in the application does not meet the requirements of the Air Quality rules. Prior to approval, please provide the following, in accordance with:

R645-301-422, Item 12 of the NOI specifies record keeping for water sprays applied to haul roads when the temperature is above freezing. The NOI indicates the records will be made available to the DAQ upon request. Items 13 and 15 of the NOI specifies length of haul road (not to exceed 7900 ft.); haul road speed limit not to exceed 15 mph; coal stockpile acreage not to exceed 3.35 acres; overburden storage piles not to exceed 60 acres. Item 14 of the NOI specifies that the open mining area shall not exceed limits established by the DOGM. This is not acceptable, because DOGM does not evaluate the size of the open pit in relation to fugitive dust and because without an indication of the size of the open pit area, the DAQ can not accurately calculate fugitive dust emissions. Therefore, the NOI should describe the dimension of the open pit areas. [PB]

R645-301-423.200, The regulatory applicability stated on page 1 of the fugitive dust control plan is not complete. The plan should cite the regulatory applicability of the Utah Coal Rules under which the plan was requested: R645-301-423 *et seq* ; R645-301-244 *et seq*; and R645-301-526.220 *et seq*. • The App. 4-5 monitoring program does not address the grading requirements of R645-301-244.300 for areas other than topsoil stockpiles. •The App. 4-5 plan for fugitive dust control practices addresses the requirements of R645-301-244.100 to protect (mulch) and stabilize (tackifier) exposed surface areas (topsoil and subsoil piles and regraded areas), however, the monitoring program does not include measurements of the effectiveness of mulching and tackifier applications to control fugitive dust and erosion from exposed surface areas. • The App. 4-5 monitoring program should specify what techniques will be used to determine opacity from a non-point source (the permit boundary). •App. 4-5 states that watering records will be maintained to show the dust control measures taken. However water applications alone are not sufficient data to evaluate the effectiveness of the fugitive dust control practices. Before and after opacity readings, wind speed and direction, should also be provided to allow an evaluation of the effectiveness of the watering applications. [PB]

TOPSOIL AND SUBSOIL

Analysis:

Topsoil Removal and Storage

Mine pits and mining sequence are described in Section 523. Overburden removal is shown on Dwg 5-16. Operational sequence and contemporaneous reclamation sequence is shown on Dwg 5-17 through 5-19.

The topsoil salvage operation is described in Section 231.100 through Section 233.100-400 and in Section Four of Appendix 2-1. Table 4-2 of Section Four in Appendix 2-1 provides the average topsoil salvage depth and the subsoil salvage depth by map unit. The topsoil salvage depth ranges from 5 to 10 inches. Subsoil suitability varies due to high pH, clay content, and carbonate accumulations. The suitable subsoil salvage depth ranges from 1 to 55 inches. Appendix 2-1, Table 4-1 outlines the soil suitability criteria to be used to determine soil suitability. Due to this wide variation in subsoil salvage depth, the application states that topsoil and subsoil salvage will be monitored by a certified soil professional (Section 231.100 and Appendix 2-1, pg. 4-2).

Dwg. 2-2 indicates salvage and stockpiling from less than half of the permit area, with the rest of the topsoil being live-hauled to contemporaneous reclamation sites. Table 4-5 provides the expected topsoil and subsoil recovery by year and acreage disturbed. Tables 4-3.1, 4-3.2, 4-3.3 provide similar information by map unit and acreage. Table 4-4 provides topsoil and subsoil salvage for facilities construction. According to plan (Section 232.500), topsoil and subsoil from year-one facilities construction areas will be stockpiled as shown on Drawing 2-2.

Three topsoil stockpiles and a subsoil pile will be located as shown on Drawing 2-2. Dwg. 2-2 describes the average depth and footprint area for each stockpile. From the information on Dwg 2-2, the combined volume of soil stored in stockpiles is 302,000 cu yds, of which 188,000 cu yds is topsoil. Stockpiled soil will be placed such that side slopes will not exceed 3h:1v and the piles will be bermed. The piles will be seeded with an interim mix of grasses described in Section 234.230. All totaled, the stockpiled soil will cover 17.5 acres.

Stockpiles in place for less than one year will be treated with tackifier to control fugitive dust. Stockpiles in place for more than one year will be surface mulched and seeded (Section 231.100). The Applicant states in Section 234.230 that other measures approved by UDOGM may be implemented to provide stockpiles protection from wind and water erosion. The Division has established that surface roughening is the best way to prevent water erosion from occurring (see

https://fs.ogm.utah.gov/PUB/MINES/Coal_Related/RecMan/Reclamation_Manual.pdf).

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The Division previously requested (Task 2910) that the Applicant utilize surface roughening on all temporary and long term stockpiles of spoil, topsoil and subsoil). This request is repeated below.

Findings:

The information provided in the application does not meet the requirements of the R645 Coal Rules for Soils Handling Operation Plan. Prior to approval, please provide the following, in accordance with:

R645-301-244.100, The Applicant states in Section 234.230 that other measures approved by UDOGM may be implemented to provide stockpiles protection from wind and water erosion. The Division has established that surface roughening is the best way to prevent water erosion from occurring (see https://fs.ogm.utah.gov/PUB/MINES/Coal_Related/RecMan/Reclamation_Manual.pdf). The Applicant must describe the use of surface roughening on all temporary and long term stockpiles (spoil, topsoil and subsoil piles). This request repeated from Task 2910 review.

HYDROLOGIC INFORMATION

Regulatory Reference: 30 CFR Sec. 773.17, 774.13, 784.14, 784.16, 784.29, 817.41, 817.42, 817.43, 817.45, 817.49, 817.56, 817.57; R645-300-140, -300-141, -300-142, -300-143, -300-144, -300-145, -300-146, -300-147, -300-148, -301-512, -301-514, -301-521, -301-531, -301-532, -301-533, -301-536, -301-542, -301-720, -301-731, -301-732, -301-733, -301-742, -301-743, -301-750, -301-761, -301-764.

Analysis:

General

Acid- and Toxic-Forming Materials and Underground Development Waste

Only the alluvial surface 30 feet of overburden is being considered for surface placement, according to Section 232.720. Baseline analysis of the surface soils in Section C Appendix 2-1 lists all surface soil analysis of hot water soluble selenium below limits of detection, 0.02 mg/kg.

Six holes were drilled within the proposed mining permit area to provide information on overburden (Sec. 622.200). Appendix 6-2 shows selenium content of less than 0.10 mg/kg in the overburden cores using method SW6020 for water soluble selenium, with the exception of the zone below the coal (0.2 mg/kg) and below 35 feet in the vicinity of CH-06-05 (location shown in App. 6-2 location map), where insufficient sample provides no information on selenium levels and/or where levels of selenium reported for the lower zones of overburden were also reported to

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be 0.2 mg/kg selenium. Since only the surface 30 feet of overburden will be returned to the surface, there should be no concern for selenium impacts to vegetation or grazing animals. To ensure that selenium levels are adequately represented by the six core holes and that selenium levels in the surface and in the submerged water table remain low, the Division will require a selenium monitoring plan for soils and overburden during final placement. Please refer to Attachment 1 of the Division's 2008 Guidelines for Topsoil and Overburden Handling when writing the Coal Hollow selenium monitoring plan. Monitoring requirements for selenium in the water table is permit specific. Please refer to Attachment 1 of the Division's 2008 Guidelines for Topsoil and Overburden Handling.

Section 728.332 describes the expected selenium hazard. In addition Section 728.332 states that Wyoming has a standard of 0.3 mg/kg selenium as suitable and between 0.3 and 0.8 mg/kg selenium as marginally suitable for topsoil and topsoil substitute. This statement fails to recognize that these concentrations are for upland areas (not agricultural areas) and that post-reclamation monitoring of selenium concentrations are required for such levels of selenium (<http://deq.state.wy.us/lqd/guidelns/guide1.pdf>).

Section 731 describes the measures to be taken to protect the surface and ground water from wash water, chemicals, fuels, and oils and from sediment load.

Findings:

R645-301-731.300 and R645-301-121.200, The Applicant states in Section 728.332 that Wyoming has a standard of 0.3 mg/kg selenium as suitable and between 0.3 and 0.8 mg/kg selenium as marginally suitable for topsoil and topsoil substitute. This statement is inaccurate and must be corrected. The Wyoming Overburden guidelines have a requirement of 0.1 mg/kg selenium in the upper four feet of reclaimed surface. Greater concentrations (up to 0.3 mg/kg) are allowable in the overburden of upland areas (not agricultural areas), with concentrations of 0.3 – 0.8 mg/kg presenting a marginally suitable overburden for upland areas. Section 728.332 also fails to recognize that Wyoming routinely requires post-reclamation monitoring of selenium concentrations are required for such levels of selenium (<http://deq.state.wy.us/lqd/guidelns/guide1.pdf>). [PB]

R645-301-731.300, To ensure that selenium levels are adequately represented by these six core holes and that selenium levels in the surface and in the submerged water table remain low, the Division will require a selenium monitoring plan for soils and overburden during final placement. Please refer to Attachment 1 of the Division's 2008 Guidelines for Topsoil and Overburden Handling when writing the Coal Hollow selenium monitoring plan. Monitoring requirements for selenium in the water table is permit specific. Please refer to Attachment 1 of the Division's 2008 Guidelines for Topsoil and Overburden Handling. [PB]

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RECLAMATION PLAN

GENERAL REQUIREMENTS

Regulatory Reference: PL 95-87 Sec. 515 and 516; 30 CFR Sec. 784.13, 784.14, 784.15, 784.16, 784.17, 784.18, 784.19, 784.20, 784.21, 784.22, 784.23, 784.24, 784.25, 784.26; R645-301-231, -301-233, -301-322, -301-323, -301-331, -301-333, -301-341, -301-342, -301-411, -301-412, -301-422, -301-512, -301-513, -301-521, -301-522, -301-525, -301-526, -301-527, -301-528, -301-529, -301-531, -301-533, -301-534, -301-536, -301-537, -301-542, -301-623, -301-624, -301-625, -301-626, -301-631, -301-632, -301-731, -301-723, -301-724, -301-725, -301-726, -301-728, -301-729, -301-731, -301-732, -301-733, -301-746, -301-764, -301-830.

Analysis:

The reclamation plan described in Section 542 is contemporaneous with the operation plan described in Section 528. Overburden removal is shown on Dwg 5-16. Operational sequence and contemporaneous reclamation sequence is shown on Dwg 5-17 through 5-19. The reclamation sequence is shown on Dwg. 5-38. Mining pits will be reclaimed within 180 days of coal removal or 1,500 ft. of active coal face. An excess spoil pile will cover 87 acres at final reclamation and rise 100 ft above the original contour. All reclaimed slopes will be 3h:1v. The surface four feet of all reclaimed surfaces will be replaced topsoil and subsoil. The post mining land use is grazing land or pastureland.

Findings:

Specific findings for reclamation are addressed by discipline below.

TOPSOIL AND SUBSOIL

Regulatory Reference: 30 CFR Sec. 817.22; R645-301-240.

Analysis:

Redistribution

The Applicant has made several commitments to test topsoil and subsoil materials during removal to ensure that the reclaimed surface provides a suitable rooting medium to a depth of four feet (Section 232.500, App. 2-1 Section 5, pg. 5-3; Section 232.700).

The Applicant has stated that 90% of the subsoil used to construct the four foot cover depth will be of good to fair quality with respect to pH and lime characteristics. The applicant

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further states, "No subsoil or overburden with unacceptable characteristics will be placed within 48 inches of the reclamation surface" (Sec. 5 pg. 5-2 App. 2-1). It is understood that the unacceptable characteristics are defined in the DOGM Guidelines for Topsoil and Overburden Handling, as reproduced in Table 4-1, Sec. 4, App. 2-1.

Reclamation slopes will not exceed 3h:1v (Sec. 242.130(c)). Prior to topsoil placement, slopes will be leveled (Sec. 242.110) and treated if necessary to reduce slippage of redistributed topsoil and subsoil (Sec. 242.200). Rubber tired equipment will be minimized on regarded slopes (Sec. 242.120). Dozers and scrapers will be used to replace the topsoil and subsoil to a depth of four feet that will be comprised of 6 – 12 inches of topsoil and the remainder subsoil (Sec. 5 App. 2-1 and Sec. 240). Soil replacement thickness will be checked using a GPS system (Sec. 242.110).

After topsoil placement, soils will be sampled for fertility and salinity with 1 sample taken per four acres (Sec. 243). Areas observed to be impacted by compaction due to heavy equipment will be ripped, disked, and harrowed prior to seeding. Areas that are not compacted will be roughened slightly with dozer tracks prior to seeding. Soil amendments will be applied over the seedbed surface. All seed will be applied by drill seeder. Seeding will occur immediately after disking, harrowing or dozer tracking and mainly in the spring or fall. (Sec. 242.120 (b)). Either 1 T/acre straw or $\frac{3}{4}$ to 1 T/acre wood fiber mulch will be applied to all reclaimed areas after seeding, as described in Section 244.200.

Findings:

The information provided in the application meets the requirements of the R645 Coal Rules for Soils Redistribution Plan.

CONTEMPORANEOUS RECLAMATION

Regulatory Reference: 30 CFR Sec. 785.18, 817.100; R645-301-352, -301-553, -302-280, -302-281, -302-282, -302-283, -302-284.

Analysis:

General

Rough backfilling and grading is required for surface mining under R645-301-553. Operational sequence and contemporaneous reclamation sequence is shown on Dwg 5-17 through 5-19. The application describes contemporaneous reclamation of the pits in Section 528.200 and Section 542. The applicant requests a variance from reclamation in the 180 day period for the 8th pit as described in Section 542. The Division has advised that the Applicant

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apply for this variance ninety days before completion of coal recovery in Pit 24, see discussion and deficiency written on this issue under R645-301-553, Backfilling and Grading.

Findings:

Further discussion and deficiency is written on this issue under R645-301-553, Backfilling and Grading.

STABILIZATION OF SURFACE AREAS

Regulatory Reference: 30 CFR Sec. 817.95; R645-301-244.

Analysis:

Stockpiled topsoil and subsoil will be bermed and seeded. These stockpiles cover 17.53 acres (Dwg. 2-2). Seeding of spoil piles is planned for piles that exist longer than a year (Sec. 528.310, p. 5-40.)

Areas adjacent to primary roads will be stabilized and vegetated (Sec. 526.400).

Haul roads will be watered or be treated with dust suppressants and a 15 mph speed limit will be imposed (Sec. 526.400 and App. 4-2).

Slopes of the contemporaneous reclaimed acreage will be less than 3h:1v and will be seeded and mulched after topsoil placement. Lands reclaimed to pasture will not be mulched, however (Sec. 244.200). Grass matting may also be used (Sec. 242.130 (c) and a variety of techniques and materials may be used depending on the reclaimed area (Sec. 244.200).

Construction of the overburden/excess spoil stockpile created from mining Pits 1 – 8 and as mining progresses from Pits 9 – 15 is described in Sec. 528.200. Staged reclamation is shown on Dwg 5-19. Section 532.300 states that topsoil will be applied to graded areas within 90 days. Major steps in the backfilling and grading described in Section 553 seem to be specific to the mined out areas. The application should clearly state the timetable for final grading of the excess spoil pile. Will final grading of the spoil pile be concurrent with construction of the pile, such that overburden from pits 1 – 3 that constitute the 2.7 million cubic yards of spoil placed on the un-mined areas will receive final grading while overburden from pits 4 – 8 is placed in the mined area?

The application specifies that seeding and mulching of the excess spoil pile will be contemporaneous with the staged approach to building the pile. i.e., First the 2.7 million cubic yards from Pits 1 – 8 will be seeded and mulched immediately after regrading and the additional

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2,500 feet extension of the excess spoil pile from Pits 9 – 15 will be reclaimed contemporaneously as well. The regrading of the excess spoil to a 3h:1h slope is described in Sec. 528.310. The reclamation timetable provided in Section 540 indicates that regraded areas will be topsoiled as soon as possible and within 90 days of final grading (pg. 5-58). Information provided on the timing of seeding is confusing. The seeding schedule is alternately described as immediately following topsoil application (pg. 2-27 and pg 5-57) or as seasonal in nature (p. 5-58) mainly occurring in early spring and late fall (pg. 2-27).

The replacement of overburden into the mined out pit will take place within 60 days (Section 553, p. 5-65). Statements on pages 5-57 and 5-66 referring to 180 day backfilling and grading of mined areas and the statement on page 5-59 referring to 15 months required for final pit backfilling seem to contradict the 60 day requirement of R645-301-553 for backfilling and grading (see deficiency written under Reclamation Plan/Backfilling and Grading Findings R645-301-553 and R645-301-121.200). The replacement of topsoil will occur within 90 days of backfilling and grading (p. 5-58).

The timetable for reclamation provided in Section 542 is specific about the mined out area, but not the spoil pile.

Treatment of rills and gullies is described in Section 244.200 and in Section 244.320 (b).

Findings:

The information provided in the application does not meet the requirements of the R645 Coal Rules for Soil Stabilization. Prior to approval, please provide the following, in accordance with:

R645-301-234.230, The seeding schedule is alternately described as immediately following topsoil application (pg. 2-27 and pg 5-57) or as seasonal in nature (p. 5-58) mainly occurring in early spring and late fall (pg. 2-27). Seeding of the spoil piles is described only for piles that exist longer than a year (Sec. 528.310, p. 5-40.) The application should specify in Chapter 2 and Chapter 5 that seeding will immediately follow topsoil application, regardless of season. • Construction of the overburden/excess spoil stockpile created from mining Pits 1 –8 and as mining progresses from Pits 9 – 15 is described in Sec. 528.200. Staged reclamation is shown on Dwg 5-19. Major steps in the backfilling and grading described in Section 553 seem to be specific to the mined out areas, not the spoil pile. The application should clearly state the timetable for final grading of the excess spoil pile. Will final grading of the spoil pile be concurrent with construction of the pile, such that the 2.7 million cubic yards of spoil from pits 1 – 3 that are placed

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on the unmined area will receive final grading, while overburden from pits 4 –8 is placed in the mined area? (Repeated from Task 2910). [PB]

CESSATION OF OPERATIONS

Regulatory Reference: 30 CFR Sec. 817.131, 817.132; R645-301-515, -301-541.

Analysis:

Information provided in the application Section 515 mimics the Coal Rules and therefore meets the requirements.

Findings:

Information provided in the application Section 515 mimics the Coal Rules and therefore meets the requirements for Emergency and Temporary Cessation Reporting.

RECOMMENDATIONS:

The application is not recommended for approval at this time.

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